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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Michael Adendorff

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EXAMINER

ROBERTSON, DAVID

ART UNIT

PAPER NUMBER

3623

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/987,905	ADENDORFF ET AL.	
	Examiner	Art Unit	
	Dave Robertson	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21,23-38,40,41,43,45-47 and 49 is/are pending in the application.
- 4a) Of the above claim(s) 7-14,19-21,30-38, 46, 47 and 49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,15-18,23-29,40,41,43 and 45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/17/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is a Non-final Office Action following Applicant's Election made 4/17/2008 to the Restriction Requirement of 3/17/2008 made in response to amendments entered by RCE filed 12/18/2007 and acknowledged in the Restriction. This action also addresses arguments made 11/13/2007 with respect to pending and elected claims and relevant to rejections maintained from the Final office action of 9/5/2007.
2. Claims 1-21, 23-38, 40, 41, 43, 45-47 and 49 are pending; claims 7-14, 19-21, 30-38, 46, 47, and 49 having been withdrawn by Applicant election. claims 1-6, 15-18, 23-29, 40, 41, 43 and 45 being examined herein;

Election/Restrictions

3. Claim 7-14, 19-21, 30-38, 46, 47 and 49 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.
4. Applicant's election with traverse in the reply filed on 4/17/2008 is acknowledged. The traversal is on the ground(s) that "the connectors including the ETL function and operational framework are components of a data warehouse system." (Remarks, page 18). This is not found persuasive because the restriction of 3/17/2008 was based on distinct inventions as subcombinations useable together. Subcombinations disclosed as useable together are by definition components of a system. Applicant does not argue error in supporting reasons for finding of subcombinations as having separate

utility or that reasons given show no burden of search; therefore, the restriction is proper.

The requirement is still deemed proper and is therefore made FINAL.

Response to Arguments

5. Applicant's arguments filed 11/13/2007 have been fully considered but they are not persuasive:

Applicant argues that neither Weissman et al (US Pat. 6,212,524 "Method and Apparatus for Creating and Populating a Datamart" and US Pat. 6,161,103 "Method and Apparatus for Creating Aggregates for Use in a Datamart" to Rauer with common inventor Weissman, 1998) nor Harmony Software, Inc. (WO 00/425543 "Methods and Apparatus for Processing Business Information from Multiple Enterprises") teach or suggest a data warehouse system for managing performance of organizations comprising a data model for storing data representing dimensions and measures applicable to multiple organizations, the data model having placeholders settable such that the data model represents a particular organization; and a configuration unit for setting the placeholders such that the data model represents the particular organization. Specifically, Applicant argues the cited references relate to data marts instead of data warehouses. (Remarks of 11/13/2007, page 19).

Examiner respectfully disagrees: One of ordinary skill in the art would recognize no functional distinction between Weissman's teaching of *data marts* and Applicant's claims to a configurable *data warehouse*. Given claims their broadest reasonable

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interpretation, the claims encompass substantially any customizable database model, data marts and data warehouse being two names in the art for substantially similar database models (i.e. both having *dimensions, measures, and relationships*).

Furthermore, Weissman and Harmony each disclose methods and a system having a database model (data mart/data warehouse) with configurable (customizable) dimensions and measures.

6. Accordingly, the rejections of the prior office action on the merits (9/5/2007) are maintained.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-6, 15-18, 21, 41 and 45 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites: *A data warehouse system...comprising a data warehouse data model and a configuration unit...* However, a system without structure where the components of the claimed system encompass non-functional data and disembodied software is indefinite. Claims 2-6, 15-17 and 45 depend from claim 1 and are similarly deficient.

Claim 18 recites: *A method for configuring a data warehouse... comprising... obtaining a data warehouse system according to claim 1.* However, because claim 1 is

indefinite as to structure, it is unclear as to how one of ordinary skill would *obtain* such a system.

Claim 21 recites: *A connector for extracting... and... transforming data... comprising...configuration ETL code unit...; and parameterized ETL code unit.* It is unclear how a *connector* comprises *code* or as to what statutory class of invention is being claimed.

Claim 41 recites: *A computer program product recorded on a computer readable medium for use in a computer implementing a data warehouse...* However, it is unclear as to what Applicant is claiming as Applicant appears to be claiming a *product* recorded on *another product* (the computer readable medium), the product to be used in a computer, the computer implementing a data warehouse. The preamble concludes claiming a data warehouse *system* comprising *sets of data* and *relationships*, whereas the body of the claim does not recite any method steps of a computer program nor structure of any system. Therefore, even taking as an interpretation an attempt to claim computer program *instructions* stored on a computer readable medium or a *system*, it would difficult to find steps or acts carried out by a computer program or apparatus.

Amendment or cancellation of claims is requested.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 18 and 23-29 are rejected under 35 U.S.C. 101 based on Supreme Court precedent, and recent Federal Circuit decisions. For a process to be patentable subject matter under § 101 the process must (1) be tied to another statutory class of invention (such as a particular apparatus) or (2) transform subject matter to a different state or thing. See *Diamond v. Diehr*, 450 US 175, 184 (1981); *Parker v Flook*, 437 US 584, 588 n9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 US 780, 787-88 (1876). If neither of these requirements is met by the claim, the method is not a patent eligible process. To qualify under § 101 as a statutory process, the claim should positively recite the other statutory class (the thing or product) to which it is tied, for example by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

In the present case, claims 18 and 23-29 recite methods (processes) not tied to any statutory class of invention or transform subject matter to a different state or thing. Claim 18 is exemplary in reciting steps of *obtaining...* and *using...*; however none of the steps is tied to a particular apparatus. As such the claims are ineligible for patenting and thus non-statutory subject matter.

Appropriate amendment is requested.

11. Claims 1-6, 15-17, 21, 40, 41, 43 and 45 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 recites: *A data warehouse system...comprising a data warehouse data model and a configuration unit...* However, a system without structure where the components of the system are disclosed as encompassing computer software is *software per se*, and software per se is non-statutory. Claims 2-6, 15-17 and 45 depend from claim 1 and are similarly deficient.

Claim 21 recites: *A connector for extracting... and...transforming data... comprising...configuration ETL code unit...; and parameterized ETL code unit.* However, a “connector” without structure where the components are disclosed as computer software is disembodied software per se, and software per se is non-statutory.

Claim 40 and 43 recite: *A computer-readable media for storing instructions or statements... for use in a computer in the execution of a method... the method comprising... providing placeholders...; and providing a configuration unit...* As such the claim encompasses a computer program per se or a description of steps of a computer program (i.e. a computer listing). Software per se in general and non-functional listings of computer programs in particular, are nonstatutory subject matter under U.S.C. 101.

Claim 41 recites: *A computer program product recorded on a computer readable medium for use in a computer implementing a data warehouse...* As such the claim

encompasses a computer program per se and software per se is nonstatutory subject matter under U.S.C. 101.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-6, 15-18, 23-29, 40, 41, 43 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weissman et al (US 6212524 B1 “Method and Apparatus for Creating and Populating a Datamart” and “Method and Apparatus for Creating Aggregates for Use in a Datamart” US 6161103 to Rauer with common inventor Weissman, co-filed May 6, 1998) in view of Harmony Software, Inc. (WO 00/425543 “Methods and Apparatus for Processing Business Information from Multiple Enterprises”).

Weissman discloses a configurable software framework for creating, populating, and maintaining business-directed dimensional data marts for a particular organization from an enterprise data warehouse, including configurable connectors used to access and aggregate multiple data sources, with emphasis on building a single data mart for one of “multiple organizations” as defined above.

Harmony discloses a configurable software framework for creating, populating, and maintaining business-directed dimensional data marts for a particular organization

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from an enterprise data warehouse, including configurable connectors used to access multiple data sources with emphasis on building data marts across an enterprise.

Claim 1

Weissman discloses a data model storing dimensions and measures (Figure 7 and Dimension Related Tables, column 14), the data model having settable placeholders (column 14, discussion of attribute setting including default values); and a configuration unit for setting the placeholders for a particular organization (see Enterprise Manager Interface, Figures 7-33 and related discussion); however, Weissman does not expressly disclose “a data model applicable for multiple organizations.”

Official Notice is taken that it is old and well known in the art of data warehousing that each organization, within a single company or across an enterprise, has different business needs, and each may have its own local data warehouse or datamart populated from data sources of a company or enterprise. (See Sen and Jacob, “Industrial Strength Data Warehousing”, Communications of the ACM, Special Issue on Data Warehousing, September, 1998.) The organization-focused decision-support capability of a dimensional datamart is precisely their advantage over attempting to extract data from enterprise resource planning (ERP) systems and on-line transaction processing OLTP systems, or from the vast data stores of a company-wide data warehouse. It is also old and well known that systems using data sources across organizations within a single company or across an enterprise require accessing and harmonizing the various types of data and database systems (Kimball, The Data

Warehouse Lifecycle Toolkit, 1998, Chapter 9 “The Back Room Technical Architecture”, pg. 357). Though Weissman teaches creating and customizing datamarts for a particular organization employing “connector” technology for the extraction of data from data sources, Weissman does not expressly give examples of building multiple datamarts for a different one of multiple organizations.

Harmony expressly discloses creating dimensional data warehouses for different organizations across an enterprise of multiple companies, or within a company having multiple divisions (see Harmony, pages 2, 3 and 5). In view of Weissman’s teaching of building datamarts for an organization, though not restricted so, and Harmony’s teaching of building datamarts for multiple organizations, it would have been obvious to one of ordinary skill in the art at the time of the invention to employ Weissman for a particular organization, and then employ Weissman for a second and third organization, thereby providing datamarts for multiple organizations. Doing so would have built for each organization of multiple organizations a datamart focused on their business needs, thereby providing more relevant data to answer their business questions and to make better decisions relative to their organization’s needs.

Claim 2

Weissman discloses a data model storing dimensions (column 14 “Dimension Related Tables”) and measures (Figure 1 (168) and column 13 “Fact Related Tables” and “measures are bits of data in fact tables” at column 6 “Definitions”) and relationships between dimensions and measures allowing the use of common dimensions for analysis by multiple organizations, including cross-function analyses

(Figure 7 in the Constellations section of the tree, Sales..Measures and Expense...Measures). *Sales* and *Expense* functions are cross-functional analyses. By the reasoning of claim 1 motivating the building of datamarts from a data model applicable to multiple organizations, using the teaching of Weissman in view of Harmony, Weissman intrinsically provides for measures to use common dimensions across functional areas in at least the dimension of "Customer" (see Figure 8, Base Dimension (810) Item "Customer").

Claim 3

Weissman teaches groupings of common (base) dimensions applicable to the "Sales" organization (Figure 8, "Sales..Dimensions" at (820)).

Claim 4

Weissman teaches dimensions having placeholders defining at least one of ...a category settor...defined by the user (see Figure 10 Dimension Windows (1000) setting a Customer Region Code).

Claim 5

Weissman teaches measures having placeholders defining at least one of ...a currency settor...defined by the user (see Figure 30 Measure Selections Units for CURRENCY).

Claim 6

Weissman teaches a configuration unit (the Enterprise Manager Interface, Figures 7-33) having at least one of...a currency settor...defined by the user (see Figure 30 Measure Selections Units for CURRENCY).

Claim 15

Weissman teaches transforming data from online transaction processing systems (OLTP) to datamarts and from data warehouses to multidimensional datamarts (see Background, column 1); however Weissman does not expressly teach using as a data source an enterprise resource planning (ERP) system.

ERP systems are database systems similarly comprehensive to a company or enterprise and similarly disadvantaged as OLTP for decision-support compared to what business-focused dimensional datamarts provide. Companies and enterprises may have one or both types of systems either providing substantial data on the business activity of interest to multiple organizations.

Harmony specifically mentions ERP systems as a data source for dimensional datamarts. Recognizing the similar disadvantages of OLTP and ERP systems for decision support, it would have been obvious to one of ordinary skill at the time of the invention that the advantages of Weissman over OLTP systems would apply as well to ERP systems, adding to the class of data sources ERP systems. Thus recognizing ERP as a data source would enable multiple organizations of those companies using ERP only, or both ERP and OLTP systems, to access and use the vast stores of data provided by each, thereby building more complete and accurate dimensional datamarts for their business analysis needs.

Claim 16

Weissman teaches an operational framework (Figure 1) with a configuration unit (the Enterprise Manager Interface –192), which is a console for configuring the data warehouse.

Claim 17

Weissman teaches a content explorer and reporting unit (see Figure 1 Query/Reporting Program--104 and Query/Results Interface—184). The Enterprise Manager Interface—192 is a metadata content explorer.

Claim 18

Weissman teaches or suggests the data model and configuration unit elements as in claim 1 (see discussion above) in the process (flowchart of Figure 2 unlabeled) of creating a data warehouse and using the configuration unit (Figure 7 to Figure 33 and related discussion) to set the model parameters.

Claim 21

Weissman teaches connectors comprise extraction transformation loading (ETL) software (Figure 22, see “Connector Steps” and within “SQL Statement”). SQL statements are extraction transformation loading code applicable against SQL databases for use in the Extraction Program unit (Figure 1 (20) and related discussion).

Claims 23-29, 40, 41, 43 and 45 recite various embodiments of the present invention having substantially similar elements corresponding to claims 1-6 and 15-17, 18 and 21 as above, and are rejected for reasons given for corresponding claims and claim elements as above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Robertson whose telephone number is (571)272-8220. The examiner can normally be reached on 9 am to 5 pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Van Doren can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dave Robertson/

Examiner, Art Unit 3623

/Beth Van Doren/

Supervisory Patent Examiner, Art Unit 3623